

Message

From: Wortman, Eric [Wortman.Eric@epa.gov]
Sent: 12/21/2021 9:45:06 PM
To: Bird, Patrick [Bird.Patrick@epa.gov]; Dain, Gregory [Dain.Greg@epa.gov]
CC: Kipka, Undine [kipka.undine@epa.gov]
Subject: FW: R1 air permit marine engine ?

FYI only with regard to addressing SFW's comments on part 94 references.

From: Stout, Alan <stout.alan@epa.gov>
Sent: Tuesday, December 21, 2021 4:42 PM
To: Wortman, Eric <Wortman.Eric@epa.gov>
Subject: RE: R1 air permit marine engine ?

Eric,
Your observations and plans are correct and good. We did not intend to redefine those terms retroactively.

I will look into amending the definitions in §1042.901 to capture the historical Tier 3 change from 5 to 7 L/cyl to avoid that confusion.

Alan

From: Wortman, Eric <Wortman.Eric@epa.gov>
Sent: Tuesday, December 21, 2021 4:33 PM
To: Stout, Alan <stout.alan@epa.gov>
Subject: RE: R1 air permit marine engine ?

Hi Alan,

Ex. 5 Deliberative Process (DP)

holiday. - Eric

3. *Category 1 Engine* means

- a. For engines regulated under 40 C.F.R. Part 1042, a marine engine with specific engine displacement below 7.0 liters per cylinder; or
- b. For engines regulated under 40 C.F.R. Part 94, a marine engine with a rated power greater than or equal to 37 kilowatts and a specific engine displacement less than 5.0 liters per cylinder.

4. *Category 2 Engine* means

- a. For engines regulated under 40 C.F.R. Part 1042, a marine engine with a specific engine displacement at or above 7.0 liters per cylinder but less than 30.0 liters per cylinder; or

b. For engines regulated under 40 C.F.R. Part 94, a marine engine with a specific engine displacement greater than or equal to 5.0 liters per cylinder but less than 30 liters per cylinder.

5. *Category 3 Engine* means a marine engine with a specific engine displacement greater than or equal to 30 liters per cylinder.

From: Wortman, Eric

Sent: Thursday, December 16, 2021 8:23 AM

To: Stout, Alan <stout.alan@epa.gov>

Subject: RE: R1 air permit marine engine ?

Hi Alan,

Ex. 5 Deliberative Process (DP)

4. The Permittee shall ensure that all category 1 and 2 engines for domestic flagged vessels operating as an OCS source that do not meet the definitions for any type of feeder jack-up vessel, supply vessel, or primary or secondary crew transfer vessel, are certified to meet the Tier 4 marine engine standards in 40 C.F.R. § 1042.101, except if one of the conditions in subparagraph 4.a. or 4.b., below, is met, in which case the Permittee may use the next lower Tier marine engine (i.e., Tier 3). Similarly, in the event that one of the conditions in subparagraph 4.a or 4.b., below, is met regarding the use of a Tier 3 marine engine, the Permittee may use a Tier 2 marine engine in lieu of a Tier 3 marine engine. In the event that one of the conditions in subparagraph 4.a or 4.b. is met regarding the use of a Tier 2 marine engine, the Permittee may use a Tier 1 engine in lieu of a Tier 2 marine engine. All engines operating on any vessel that is not a jack-up vessel, supply vessel, or primary or secondary crew transfer vessel while that vessel meets the definition of an OCS source, shall be certified as meeting the emission limits for a Tier 3 or 4 marine engine in 40 C.F.R. § 1042.101 or Tier 1 or 2, and 40 C.F.R. part 94, depending upon whichever Tier the marine engine is certified to meet. In order to use a lesser Tier marine engine, as described above, one of the following conditions must be met:

a. A vessel with a higher Tier engine is not available within two hours of when the vessel must be deployed;

b. The total emissions associated with the use of a vessel with the higher Tier engine(s) would be greater than the total emissions associated with the use of the vessel with the next lower Tier engine(s). For purposes of this subparagraph, when determining the total emissions associated with the use of a vessel with a particular engine, the Permittee may include the emissions of the vessel that would occur when the vessel would be going to the WA from the vessel's starting location.

Ex. 5 Deliberative Process (DP)

3. *Category 1 Engine* means

- a. For engines regulated under 40 C.F.R. Part 1042, a marine engine with specific engine displacement below 7.0 liters per cylinder; or
- b. For engines regulated under 40 C.F.R. Part 94, a marine engine with a rated power greater than or equal to 37 kilowatts and a specific engine displacement less than 5.0 liters per cylinder.

4. *Category 2 Engine* means

- a. For engines regulated under 40 C.F.R. Part 1042, a marine engine with a specific engine displacement at or above 7.0 liters per cylinder but less than 30.0 liters per cylinder; or
- b. For engines regulated under 40 C.F.R. Part 94, a marine engine with a specific engine displacement greater than or equal to 5.0 liters per cylinder but less than 30 liters per cylinder.

5. *Category 3 Engine* means a marine engine with a specific engine displacement greater than or equal to 30 liters per cylinder.

Thanks,

Eric

From: Stout, Alan <stout.alan@epa.gov>
Sent: Thursday, December 16, 2021 7:03 AM
To: Wortman, Eric <Wortman.Eric@epa.gov>
Subject: RE: R1 air permit marine engine ?

Eric,
We simply transcribed the Tier 1 and Tier 2 standards from part 94 into 40 CFR part 1042, appendix I, so updating the reference should allow for clear communication without further changes.

I would be interested to see the 4.a and 4.b exception clauses.

Alan

From: Wortman, Eric <Wortman.Eric@epa.gov>
Sent: Wednesday, December 15, 2021 2:40 PM
To: Stout, Alan <stout.alan@epa.gov>
Subject: R1 air permit marine engine ?

Hi Alan,

I'm an air permit engineer in Region 1 working on several permits for offshore wind farms. Those permits requirement the permittee to comply with various engine requirements for vessels. Our permits have previously referenced the

standards in 40 CFR part 94 as shown in the example below. I recently became aware of the rulemaking changes to part 94 which seem to have incorporated the part 94 emission limits into 40 CFR part 1042.

Ex. 5 Deliberative Process (DP)

“The Permittee shall ensure that all category 1 and 2 engines for domestic flagged vessels operating as an OCS source that do not meet the definitions for any type of feeder jack-up vessel, supply vessel, or primary or secondary crew transfer vessel, are certified to meet the Tier 4 marine engine standards in 40 C.F.R. § 1042.101, except if one of the conditions in subparagraph 4.a. or 4.b., below, is met, in which case the Permittee may use the next lower Tier marine engine (i.e., Tier 3). Similarly, in the event that one of the conditions in subparagraph 4.a or 4.b., below, is met regarding the use of a Tier 3 marine engine, the Permittee may use a Tier 2 marine engine in lieu of a Tier 3 marine engine. In the event that one of the conditions in subparagraph 4.a or 4.b. is met regarding the use of a Tier 2 marine engine, the Permittee may use a Tier 1 engine in lieu of a Tier 2 marine engine. All engines operating on any vessel that is not a jack-up vessel, supply vessel, or primary or secondary crew transfer vessel while that vessel meets the definition of an OCS source, shall be certified as meeting the emission limits for a Tier 3 or 4 marine engine in 40 C.F.R. § 1042.101 or Tier 1 or 2, and 40 C.F.R. part 94, depending upon whichever Tier the marine engine is certified to meet.....”

Thanks for any input.

Eric

Eric Wortman
U.S. EPA Region 1
5 Post Office Square, Suite 100
Boston, Massachusetts 02109
Telephone: (617) 918-1624 | Email: wortman.eric@epa.gov